Cost of treating patients with solitary cysticercus granulomas

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In this issue, the article by Murthy and Rajshekhar,[1] documents the cost of treating patients with seizures due to a solitary cysticercus granuloma (SCG). The cost of managing a patient was calculated from the time the patient registered at their clinic till resolution of the granuloma was documented on the computerized tomography (CT) scan. They arrived at a figure of INR 7273.7 per patient at 1997 rates. They then calculated the economic burden of this disease to the country at large by extrapolating the prevalence figures obtained in their community-based study of prevalence of SCG in a rural community in Andhra Pradesh, to the country’s population. The prevalence of SCG was shown to be 0.1 per 1000 in their study and thus the number of patients with SCG in the country as a whole was calculated as 1,10,700 patients. This number was multiplied by the total cost of treatment per patient to arrive at the final figure of INR 1.184 billion (this figure is adjusted for inflation as the cost calculated initially was at 1997 rates). This figure in US$ is 26.05 million and not as reported by the authors (US$ 2.605 million).

A comprehensive estimate of the economic burden of epilepsy in India carried out in six public and private medical centers in the country estimated that the cost of managing patients with epilepsy was INR 68.75 billion at 1998 rates.[2] However, the cost of treating seizures due to a particular disease entity such as SCG has not been studied. The authors are to be commended for performing a meticulous study. However, there are some issues that come to mind. The cost was calculated from the time the patient visited the authors’ clinic. It is not clear whether the cost of treating seizures (both direct medical costs and wages lost), which occurred before the patient visited their clinic, was included in their final calculation. This is a significant burden as the mean number of seizures before the visit was nearly four and the mean duration of illness was nearly 12 months. During this period even if the patients did not receive anti-epileptic drugs (AEDs), there would have been significant loss of wages. Another issue that is debatable is the frequency of repeat CT imaging after the initial repeat CT done 6 months after the diagnosis. CT scans could probably be repeated at six monthly intervals rather than three monthly intervals, as the benefit of doing imaging at shorter intervals is minimal. The only likely benefit of more frequent imaging is that it could avoid prolongation of AED usage in those in whom there is early resolution of the granuloma. However, a longer interval between imaging would increase the likelihood of a resolution and thus lower the cost of management not only in individual patients but also in the group as a whole, by reducing the number of CT scans that are required to document the resolution of the granuloma. Finally, the costs as calculated by the authors may not be universally applicable to the diverse types of health delivery systems that prevail in the country.

Why are studies such as these important? Policy makers can use figures from such studies to determine the priority that is to be accorded to a particular disease in terms of formulating public health control and prevention measures. Every disease imposes economic costs and social and mental costs (that cannot be estimated in dollar terms) on the affected individual. However, in preventable diseases such as NCC there exists an opportunity to avoid these costs to the society. Public health authorities have to work out the costs of prevention keeping in mind the cost of the disease to the community.

Besides, the economic cost of illness, the DALY (disability adjusted life years) count of a disease also plays a crucial role in determining its importance in the public health agenda. In the context of prevention and control, control of SCG entails control of NCC. Therefore, ideally one would like to know the cost of treating patients with all the manifestations of NCC. Admittedly, this is a difficult task as there are no prevalence studies from our country for the various presentations of NCC. Recently, we estimated the contribution of NCC to the causation of active epilepsy (AE) in a community based study using CT imaging.[3] Our study revealed that the prevalence rate of AE due to NCC was one per 1000 population and thus, at least one million patients in the country suffer from AE due to NCC. It is easy to comprehend that the cost of treating this large number of patients with AE (which requires treatment with AEDs for a prolonged

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period) will be much higher than the cost of treating patients with SCG alone. The huge economic costs could then be used to convince policy makers of the need to institute control measures even though capital and recurring costs might be high in the short term.

This article should inspire others to study the cost of managing common neurological and neurosurgical diseases of public health importance and thereby draw the attention of policy makers to the economic importance of implementing disease-appropriate control measures.

References